

Growing Up Waterwise

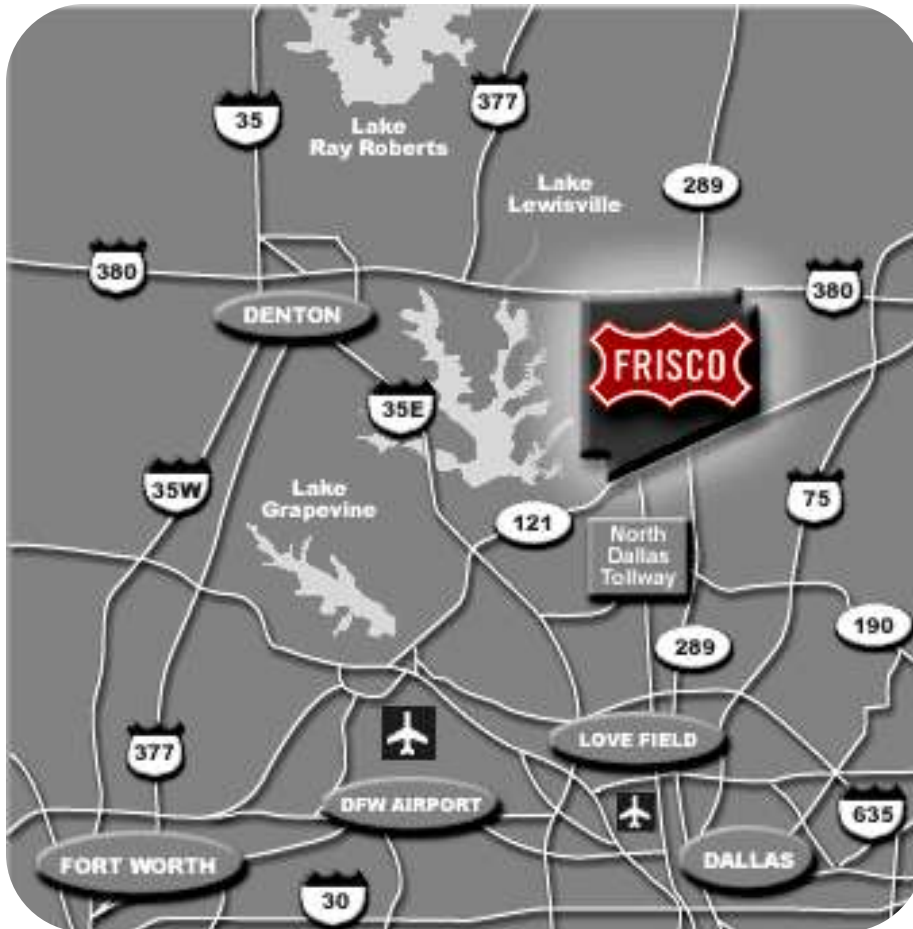
Frisco's Waterwise Programs

Melody Emadiazar

Water Education Coordinator



Location



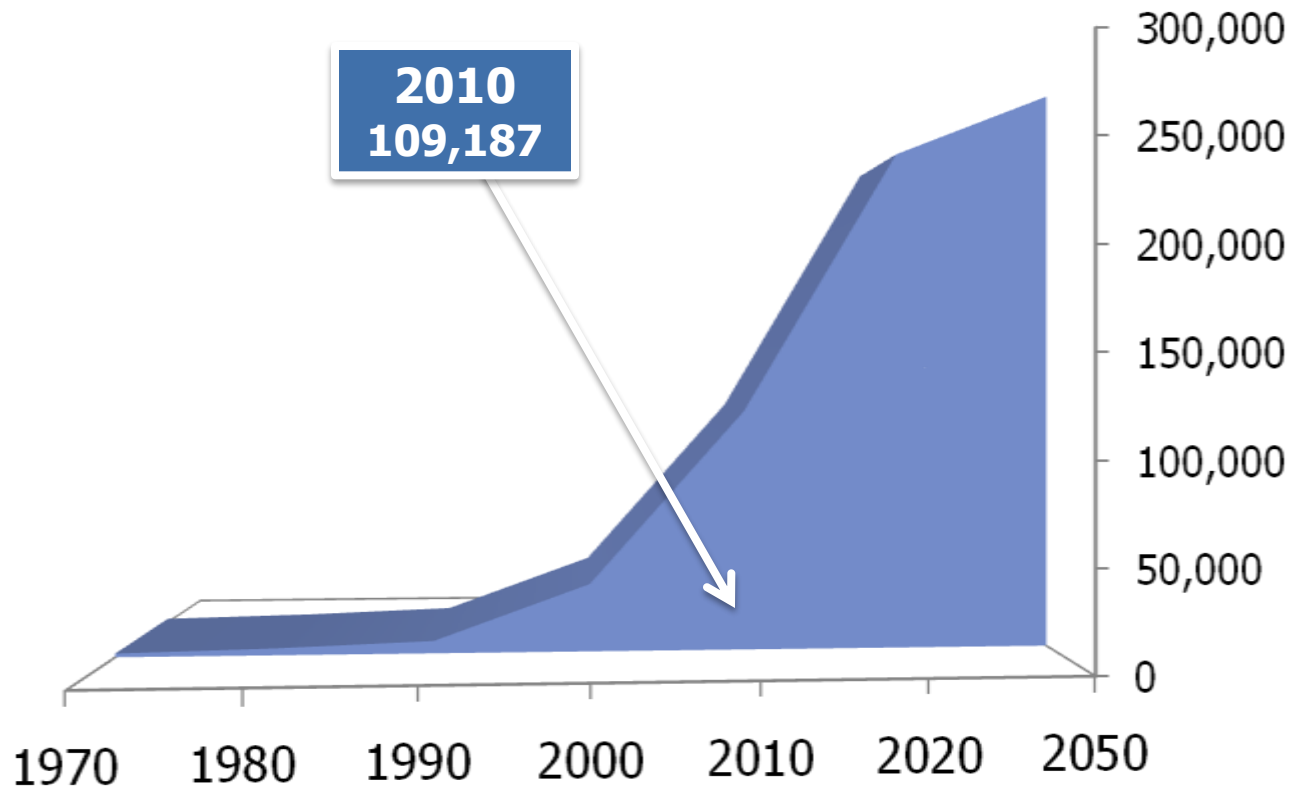
Frisco, Texas

- Denton and Collin County
- 70 square miles
- Bordered by McKinney, Plano, Allen, Little Elm, The Colony, and Prosper
- 40% Developed

Population

Year Residents

1970	1,845
1980	3,420
1990	6,138
2000	33,714
2009	106,036
2010	110,000
2020	148,000
2050	280,000

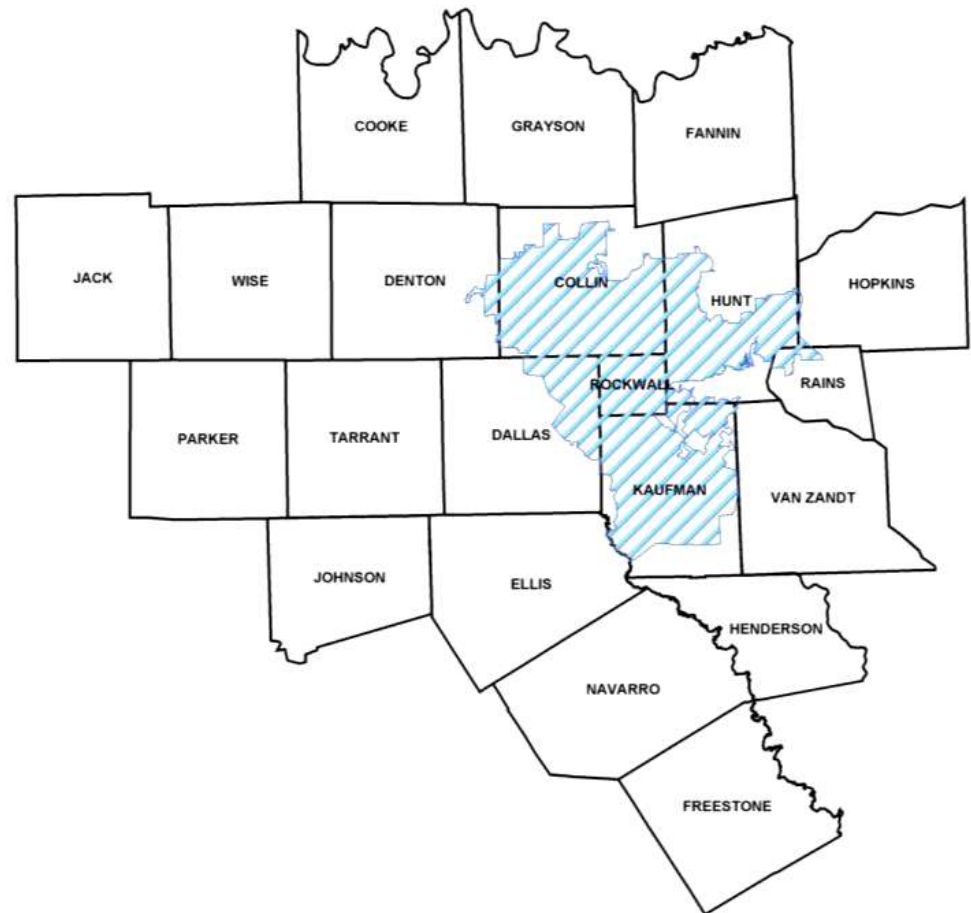


North Texas Municipal Water District

Treated Service Area

- **1.7 million people**
- **49 Customer Cities,
Towns, and Water Supply
Corporations**
- **13 Member Cities**

Allen, Farmersville, Forney, Frisco, Garland,
McKinney, Mesquite, Plano, Princeton,
Richardson, Rockwall, Royse City, Wylie





A brown wooden sign with white text stands on two wooden posts. The sign is located on the right side of a gravel boat ramp. The background shows a wide river or lake under a clear blue sky, with green trees and grassy banks. A small white tower is visible on the far shore.

Boat Ramp

**Loading and
Unloading Only**

**No Wake Zone
Idle Speed Only**

**Flotation Devices
Required**

**No Swimming
or Wading**



ELEVATION 475.05
10/10/2006



ELEVATION 496.72
7/24/2007



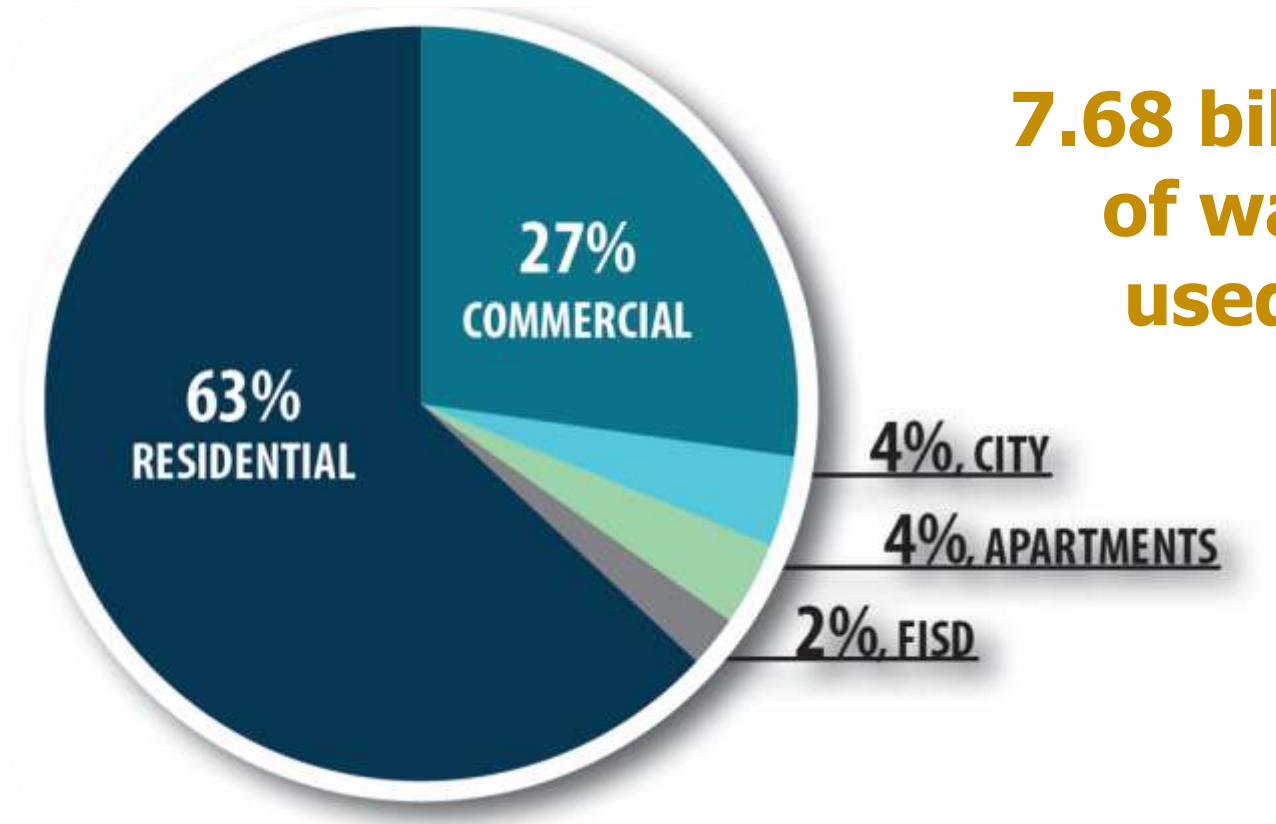
ELEVATION 475.05
10/10/2006



ELEVATION 496.72
7/24/2007

Water Usage

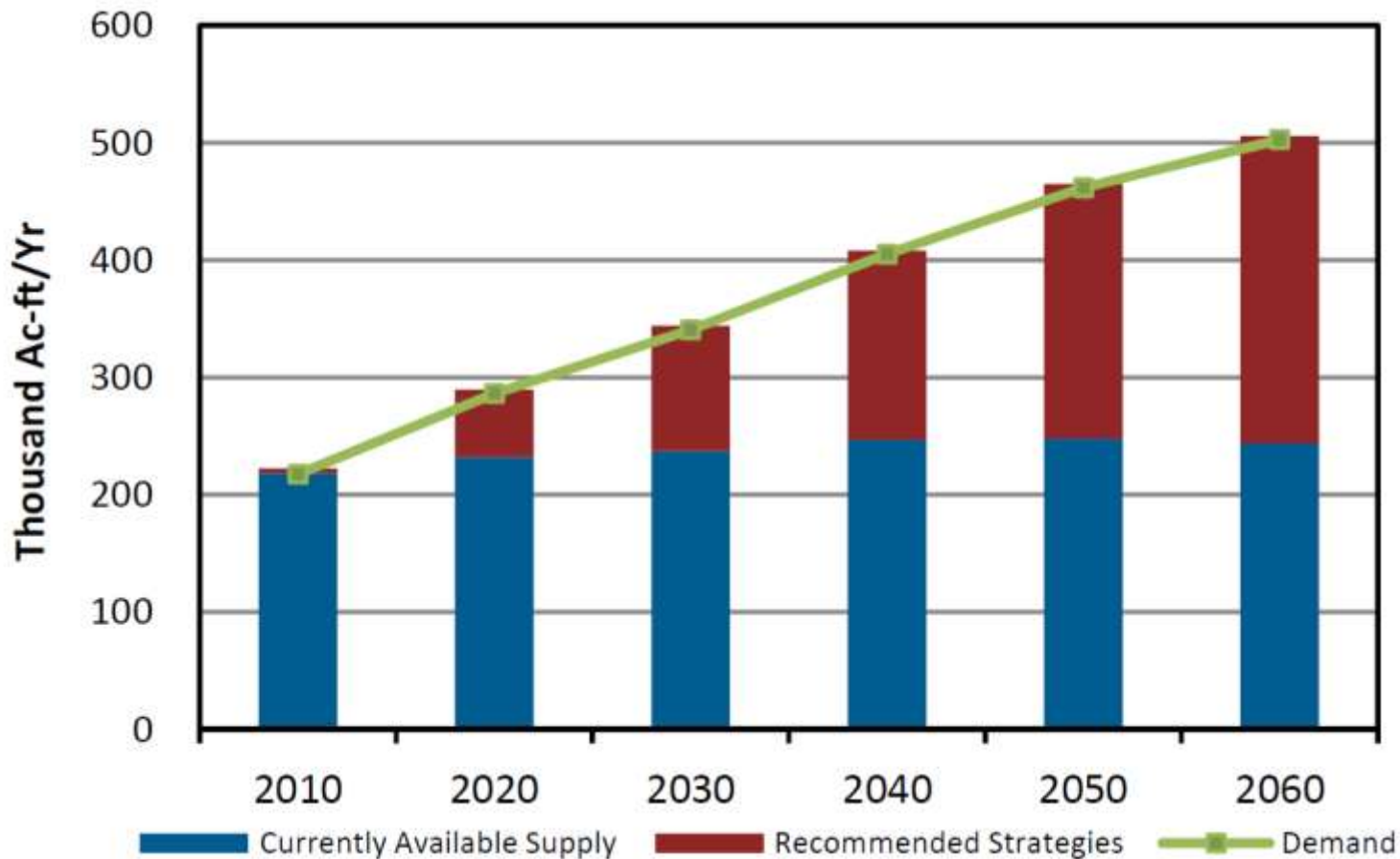
From 2009



**7.68 billion gallons
of water were
used in 2009**

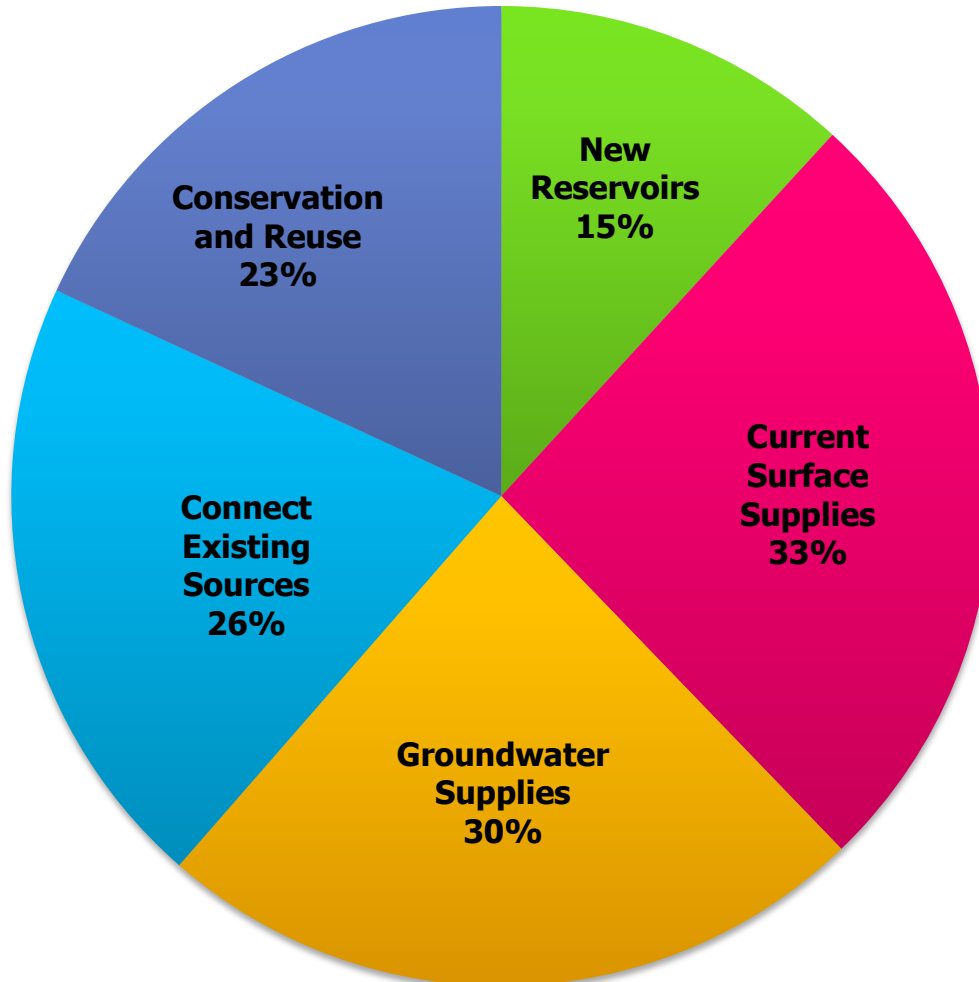
Future Supply/Demand

Collin County



Water Resources

Region C - 2006



Water Management Plan



Water Conservation – Frisco Based

- **Water Efficiency Plan (Year Round) – Daylight Saving Time**
- **Emergency Service Levels I and II**

Drought Contingency – NTMWD Based

- **Stage 1: Voluntary – 2% Reduction**
- **Stage 2 : Mandatory – 5% Reduction (two days/week watering)**
- **Stage 3 : Mandatory – 10% Reduction (one day/week watering)**
- **Stage 4 : Mandatory – 10%+ Reduction (no outdoor watering)**

Water Efficiency Plan



Common Outdoor Water Uses	FALL & WINTER
	CENTRAL STANDARD TIME
Using a Sprinkler System	1 Day/Week Recommended
Time-of-Day Restrictions	None

Water Efficiency Plan



Common Outdoor Water Uses	FALL & WINTER	SPRING & SUMMER
	CENTRAL STANDARD TIME	DAYLIGHT SAVING TIME
Using a Sprinkler System	1 Day/Week Recommended	2 Days/Week Recommended
Time-of-Day Restrictions	None	Watering prohibited from 5am – 8am & from 10am – 6pm

Water Efficiency Plan

Reminder

Residential Trash Day	Additional Watering Day
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Monday

Thursday

Tuesday

Saturday

Wednesday

Saturday

Thursday

Sunday

Friday

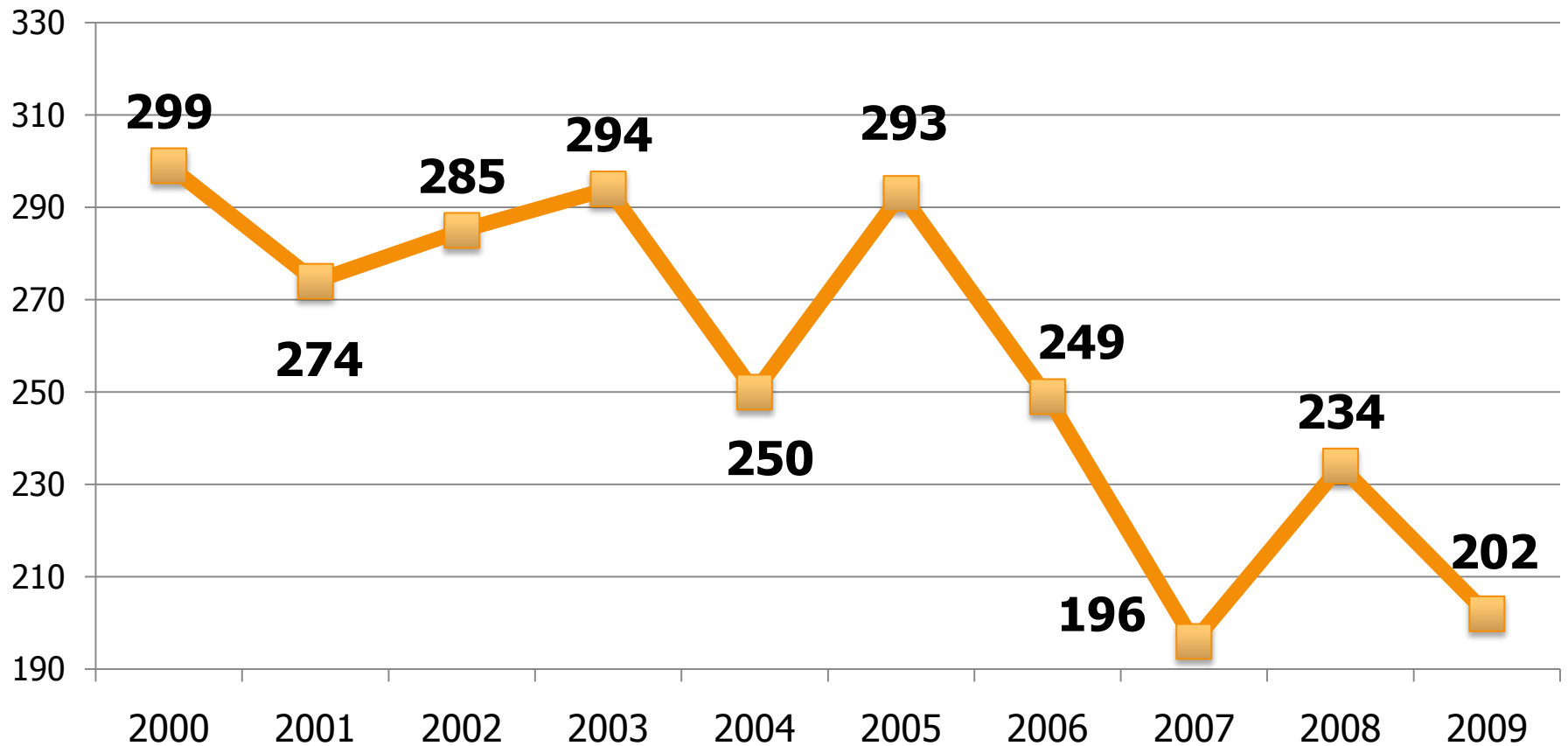
Tuesday

Water Efficiency Plan

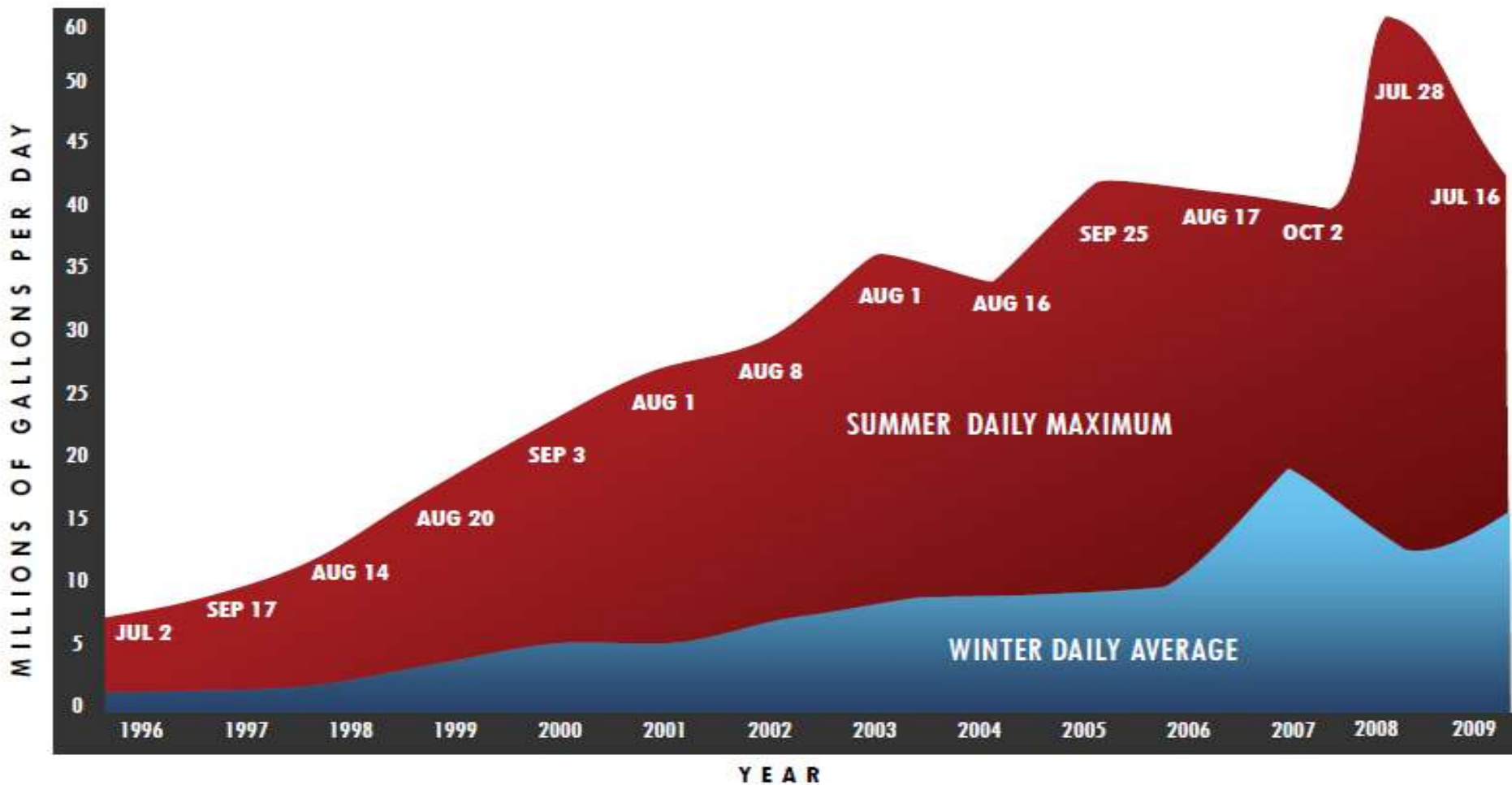


Common Outdoor Water Uses	FALL & WINTER	SPRING & SUMMER	JULY 1- SEPT 30
	CENTRAL STANDARD TIME	DAYLIGHT SAVING TIME	SUMMER RESTRICTIONS
Using a Sprinkler System	1 Day/Week Recommended	2 Days/Week Recommended	Mandatory Watering Schedule
Time-of-Day Restrictions	None	Watering prohibited from 5am – 8am & from 10am – 6pm	Watering prohibited from 5am – 8am & from 10am – 6pm

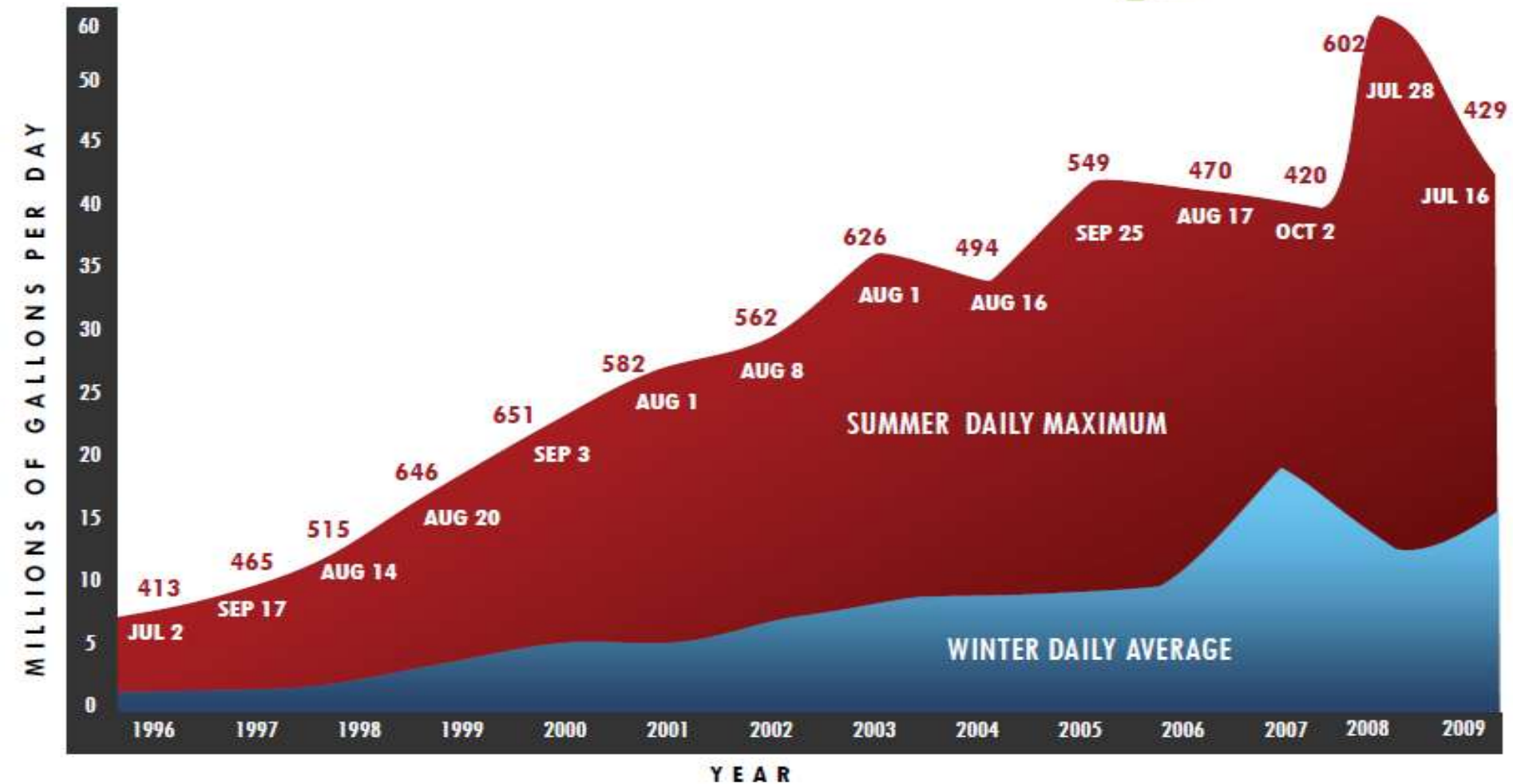
Annual GPCD



Seasonal Water Use



Maximum GPCD



Free Sprinkler Checkups

Residents Learn How To:

- Find/repair minor broken or misaligned sprinkler heads
- Make scheduling adjustments to their controller
- Increase their efficiency with retro-fit devices like a smart controller or rain/freeze sensor





FREE IRRIGATION AUDIT
972-292-5800

FRISCO

FRISCO













Weather Station

Weekly Watering Recommendations

- **Calculate and monitor our daily ET rate.**
- **Provide weekly recommendation on**
www.friscotexas.gov/water
- **Send weekly emails to list residents.**



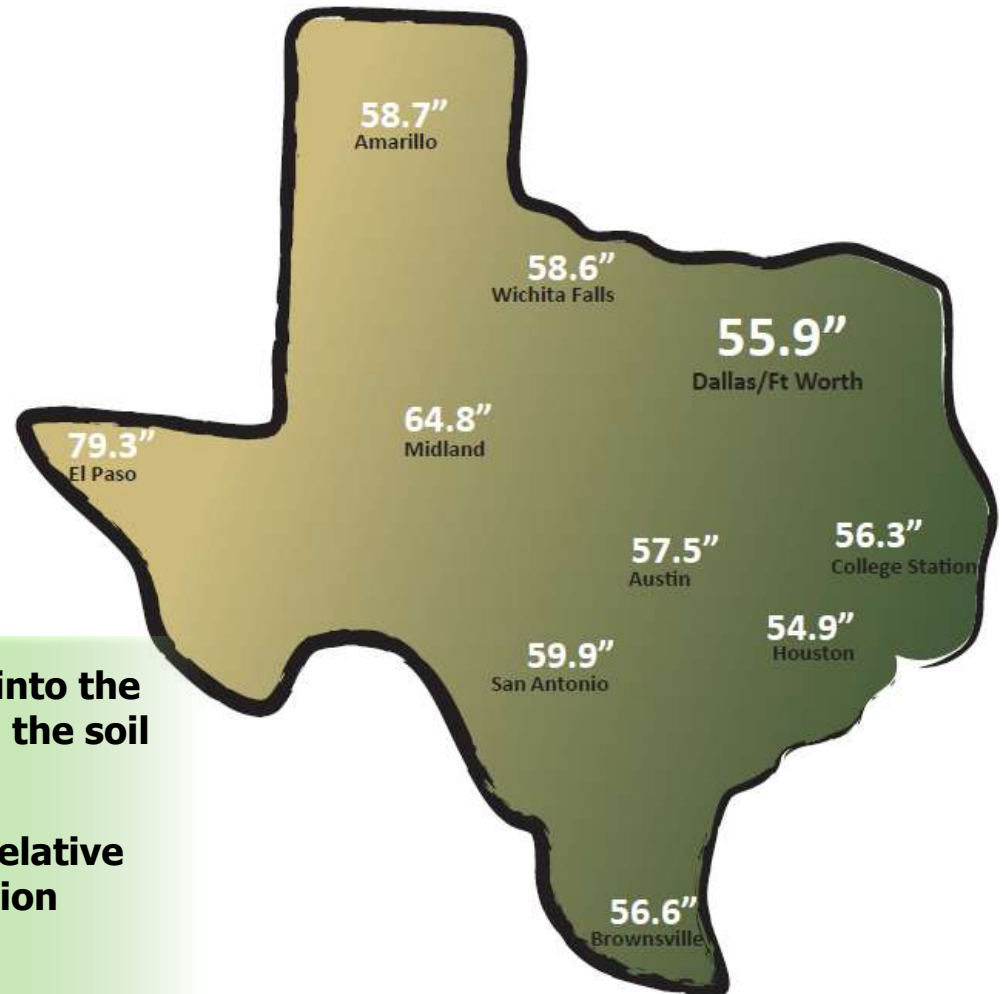
Monitoring ET



It's the amount of moisture absorbed into the atmosphere through evaporation from the soil and transpiration from plant surfaces.

Several factors such as temperature, relative humidity, wind speed, and solar radiation affect Evapotranspiration values.

<http://texaset.tamu.edu/>



Weekly Advice



From May 2009 through March 2010:

Watering Recommendation	# Weeks	Total %
"No Watering"	33	69%
1x/wk	13	27%
2x/wk	2	4%
Total	48	100%

Smart Controller Program

- **Launched July 2007**
- **New sprinkler systems require smart controller**
- **Existing sprinkler systems are eligible for \$100 rebate incentive on water bill**
- **Homeowner receives yard sign**
- **Requires an annual membership renewal**





FRISCO
Water  **Wise**


USE WATER WISELY

ET CONTROLLER SITE

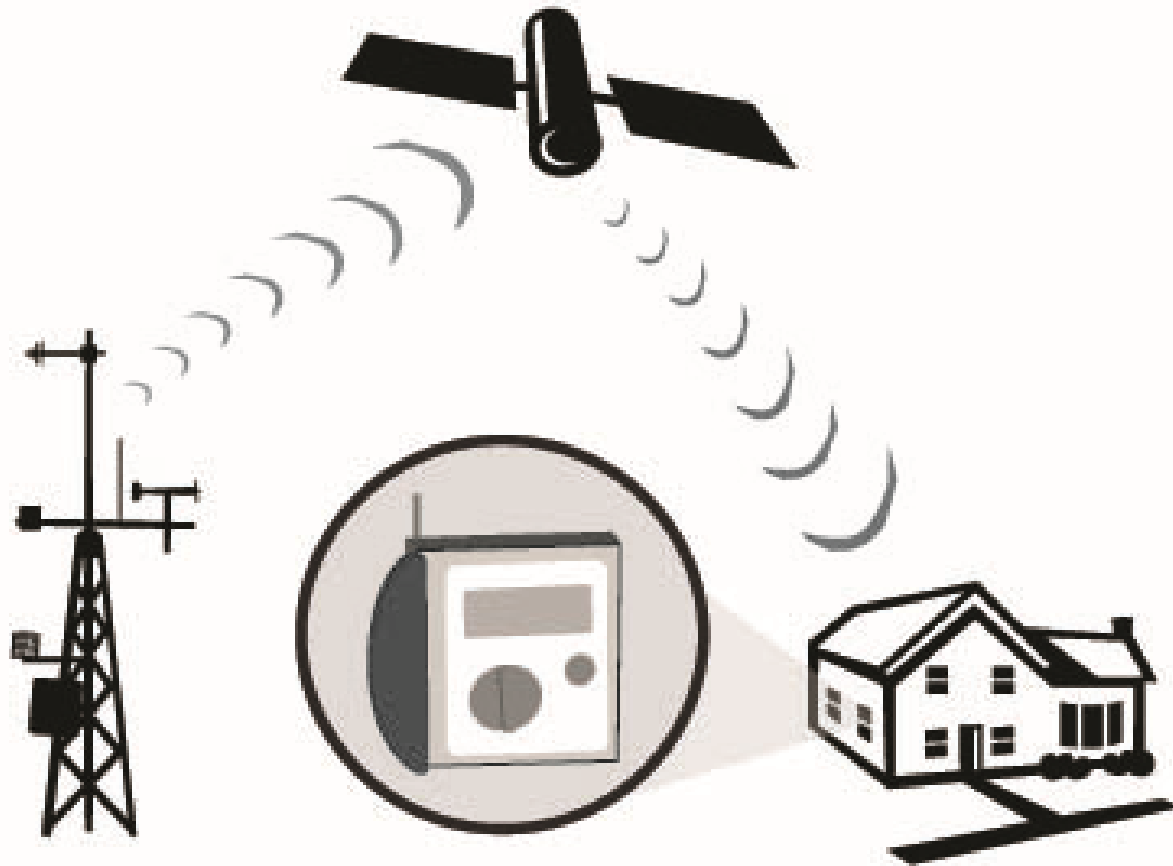
www.friscotexas.gov/water

972-292-5800



Weather Data Subscription

1



On-Site Weather Monitor



2

Soil Moisture Sensor

3



Manufacturer	Weather Data	Model
<u>Acclima</u> www.acclima.com 972-727-8356	Requires a soil moisture probe.	Acclima 
<u>Baseline</u> www.baselinesystems.com 866-294-5847	Requires a soil moisture probe.	WaterTecS100 
<u>ET Water</u> www.etwater.com 214-908-2388	Requires web-interface for programming.	Smart Controller 
<u>Hunter</u> www.hunterindustries.com 800-733-2823	Requires an on-site weather monitor.	ET System 
		Solar Sync 
<u>Irritrol</u> www.irritrol.com 800-634-8873	Requires a subscription an with off-site weather station.	Smart Dial 

Qualifying Controllers

Water Use Comparison Reports

Outdoor Water Needs and Water Usage Report for 2007



Property:	
Address:	XXXXXXXXXXXX
Estimated Irrigated Area (square feet):	3,205
Estimated Outdoor Usage (gallons per month):	12,000

Total Water Usage (gallons)												
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
15,400	25,000	45,500	45,000	41,100	35,400	31,000	30,500	44,700	27,200	36,000	31,000	361,300

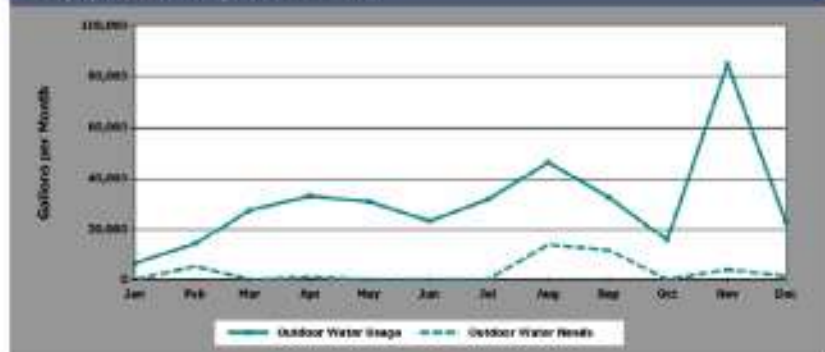
This is your total indoor and outdoor water use by month. To see your estimated outdoor water use, please refer to the solid line in the graph below.

Excess Outdoor Usage (gallons)												
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
4,400	8,945	27,127	22,176	21,100	21,400	21,800	21,628	21,692	25,700	21,262	21,720	202,238

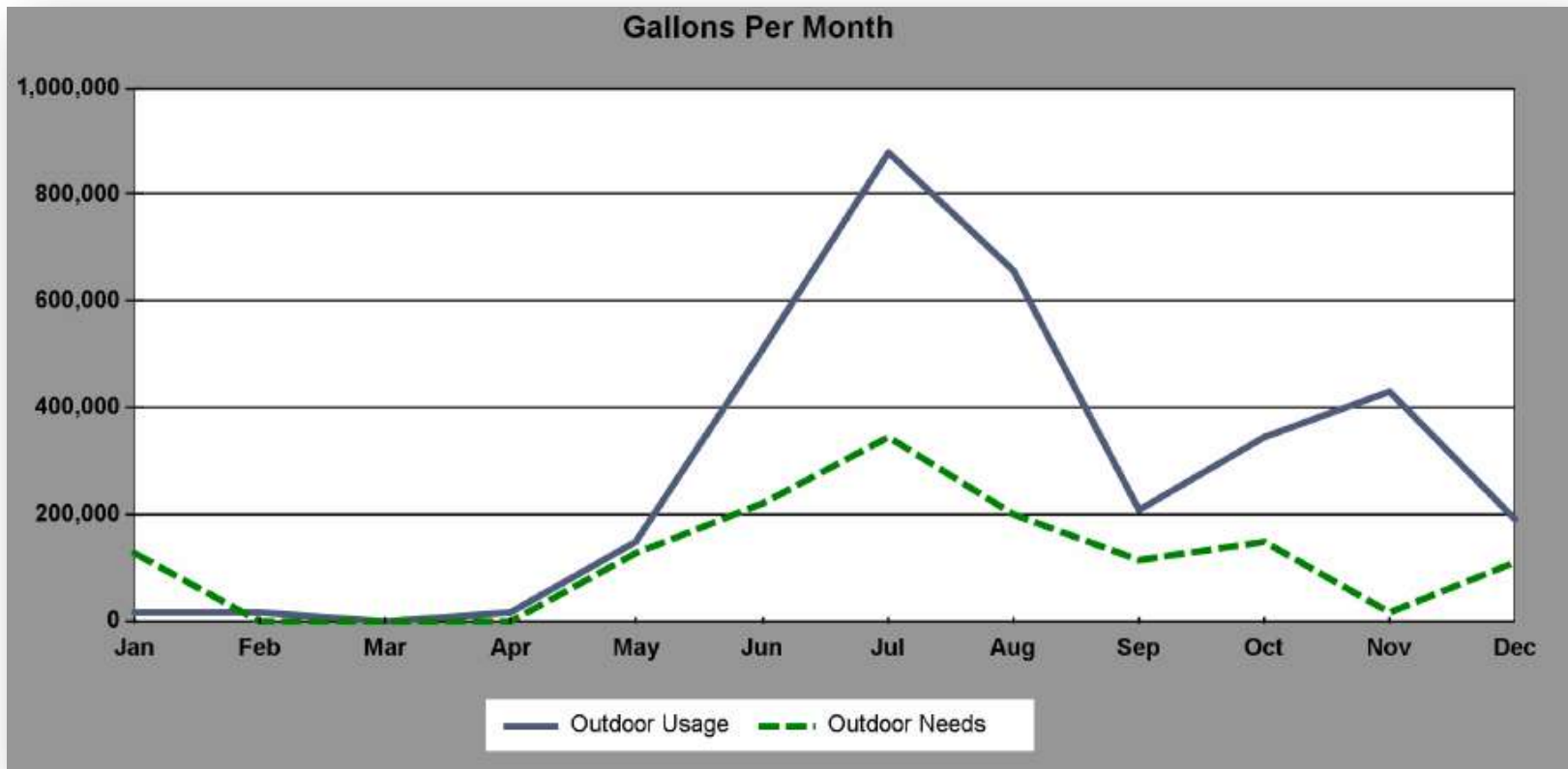
This is your total estimated outdoor water use that exceeded the beneficial amount of water needed to maintain a healthy and beautiful landscape. To understand how we determine our landscape water needs, please read the information below the graph.

Total Potential Savings:	
Based on the Excess Usage (gallons):	\$10,750
Water Cost (\$1,000 per):	\$2.00
Total Potential Savings:	\$933.21

Your Property's Outdoor Water Usage vs. Outdoor Water Needs



Not So Smart Controller



Account Data



Estimated Irrigated Area (square feet)	154,882
Estimated Indoor Usage (gallons per month)	12,000

Total Proposed Savings	
Total Excess Outdoor Usage (gallons)	2,119,774
Water Cost (\$/1000 gal)	\$2.98
Total Potential Savings	\$6,316.93

Landscape Water Allowance Program

- **Notify property owners that they exceeded the LWA limit**
- **Assess the annual total amount of water that was required to keep plant material healthy**
- **Provide schedule a free irrigation system consultation**



Notification

Landscape Water Allowance Program

Dear WILLOW BAY HOA,

After assessing your property's landscape water consumption for 2009, our staff found that your water usage was well above the annual total amount of water that was required to keep your plant material healthy. Your landscape property is unique because it has a customized Landscape Water Allowance (or LWA). This tool identifies the healthy watering balance necessary for the size of your property and your plant material.

There may be several reasons for exceeding your LWA limit. An improperly set irrigation controller could explain the higher than normal water use. A less obvious explanation may be an undetected leak in your irrigation system.

See your property's water usage for 2009 below:

Your Landscape Water Allowance	Your Actual Water Usage	Percent of Overwatering	Total Inches of Water Applied to Your Landscape
249,202	3,136,000	1158.4%	361.6"

The difference between your LWA and actual water usage shows that you could have saved a significant amount of money and water last year.

Please contact us sometime before May 1st to schedule a free irrigation system consultation. Our on-staff licensed irrigation specialist will help you determine why your property's irrigation system is watering more than it was designed for. The solution may be as simple as a tweak in your irrigation controller's programming.

We recommend that you arrange to have your hired landscape professional available at the time of your free consultation. Please call or email me to set up for your consultation.

Sincerely,
Melody Emadiazar
Water Education Coordinator
City of Frisco, Public Works Department
memadiazar@friscotexas.gov
972-292-5814

www.friscotexas.gov/water

Check for Leaks



10% of homes have leaks that waste more than 90 gallons a day.

Retro-fitting with WaterSense labeled fixtures can save a family up to \$2,000 in water bills over lifespan of the products.



Check for Leaks

Inside

Toilets – rubber flappers

Faucets – worn out washers

Showerheads – “O”rings

Outside

Spigot – loose connection

Irrigation System – broken sprinkler heads, worn valves



EPA WaterSense Program



EPA
WaterSense
PARTNER

WaterSense Label



Products

Bathroom Sink Faucets
Flushing Urinals
High-Efficiency Toilets
Landscape Irrigation Services
Showerheads
Weather or Sensor-Based
Irrigation Control Technologies

Waterwise Car Wash Program

- Car wash facilities send fewer phosphates and chemicals into streams and lakes.
- At home car washing uses 50 to several hundred gallons of water.
- Car wash facilities can conserve and discharge water into the sanitary sewer where it can be reused.





Green Living

Latest News

- ▶ At Frisco's IKEA store, Blue and Yellow Mixes with a Green Approach
- ▶ Target Adds Recycling Stations to Frisco Stores
- ▶ For Frisco's Tanja Eltze, Living Green Is Part of Making a Difference
- ▶ Frisco Celebrates 40 Years of Earth Day with 'Clean It & Green It' Event
- ▶ Time to Switch Your Sprinklers; City of Frisco's Water Management Plan in Effect
- ▶ Ask the Green Expert: Making Your Own Rain Barrel
- ▶ Seasonal Watering Tips
- ▶ Green Kids' Art Contest Celebrates 40th Anniversary of Earth Day
- ▶ Frisco Mercantile Attracts Recycling Artisans
- ▶ Recycling Fees to Be Added to Water Bills

Ask the Green Expert: Making Your Own Rain Barrel

By Laura Gorecki

One of my personal goals is to always look for more ways to "Be Green". I plan to expand my home gardening this year and I had been considering buying a rain barrel for my yard. I was surprised to find out commercial models can cost as much as \$150 or more for a one-barrel system.

After reading an instruction sheet on the Internet on how to make a rain barrel at home, I decided to give it a shot. I had a large garbage can in the garage that we were not using, and I thought it would do the trick.

I took my instruction sheet to Home Depot to get the supplies. A worker helped me find everything I needed. I got the parts to make a 2-barrel system, and planned to add the second barrel later. I opted for a \$7 splitter attachment that allows for 2 hoses to be connected to one faucet. The cost for all of the materials was about \$40.

I got home and learned that my garbage can had a small hole in the bottom so it would not hold water. Back to Home Depot I went. I found 32-gallon heavy-duty trash cans, with lids, for \$14.95 each so I bought two of them. That brought my cost up to \$70 for two barrels.



The finished rain barrel. (Photo: Laura Gorecki)

Air & Water



How Much Do I Water?

The City of Frisco recently completed the installation of its weather station and remotely placed rain gauges. Data collected from the weather station can help determine weekly watering recommendations for Frisco residents.

[Read more](#)



Checking for Leaks

Being handy around the house doesn't have to be difficult. Common types of leaks found in the home are leaking toilet flappers and dripping faucets. These types of leaks are easily correctable, in most cases requiring only a few tools and hardware that can pay for themselves in water savings.

[Read more](#)



Free Irrigation Check-Ups

We would like to help you save water and keep a beautiful landscape. Learn how you can reduce your outdoor water use and maintain a healthier landscape by scheduling a free irrigation check-up with the City of Frisco's Irrigation Specialist.

[Read more](#)



Annual Drinking Water Reports

The City of Frisco provides an annual water quality report to its water customers. It summarizes information regarding Frisco's water sources, any detected contaminants found in the water, special health effects, compliance and educational information.

[Read more](#)

Outreach Efforts

Tips on Selecting an Irrigation Professional

April 2010 - from the monthly posts by Mike Barth for "Mike's Advice"

There comes a time when hiring an irrigation professional becomes necessary. I am frequently asked by residents for recommendations on sprinkler repair companies. There are a few things to keep in mind when deciding on which company to hire.

1. Look for a *Licensed Irrigator* – Make sure to verify that the person you hire has gone through the proper training to get a license. Licensed irrigators attend ongoing annual training to ensure they stay up to date on the latest technology to help you maximize your landscape watering.
2. Ask for references – You want a company that has customers who are willing to back up their claims of good service.
3. Ask about experience working in Frisco – We have unique regulations here in Frisco that must be followed and you want to be sure the specialist you hire is familiar with those regulations.
4. Find out if the specialist is familiar with your specific smart controller –Many different systems are on the market and they all operate differently. You want a professional who can make sure your equipment is operating at its full potential. They also should be able to show you how to operate the controller and answer any questions you may have about the system.
5. Ask friends and neighbors about irrigators they have hired – If they had a good or bad experience with someone they worked with their input can be very helpful. Find out what concerns, questions, and issues they came across in their experience so you know what to expect.

Walk your system frequently, especially after mowing, to become familiar with your equipment. The key to avoiding water waste is catching the problems early.



Follow Us On Twitter!

***Tweak** (don't
tweet) **your**
sprinkler
system for
free!*



www.twitter.com/CityofFriscoTX

Workshops



- **Make Your Own Rain Barrel**
- **Lawn Care 101**
- **Texas Gardening**
- **Irrigation 101**
- **Drip Irrigation**
- **Composting**
- **Pruning**
- **Fall & Winter Care**

Questions?

Contact us at:

waterwise@friscotexas.gov

972-292-5814

www.friscotexas.gov/water